U.S. provisional applications 60/052,586, filed July 15, 1997, 60/065,728, filed November 14, 1997, and 60/085,538, filed May 15, 1998.

In the claims:

Please cancel claims 1-35.

Please enter the following new claims:

--36. A polyamine derivative, or salt thereof, wherein said derivative has the formula

R_1-X-R_2

wherein

R_1-X- is of the formula R-NH-CR'R"-CO- wherein -NH-CR'R"-CO- is

a D- or L- form of valine, asparagine, or glutamine, or

the D- form of lysine or arginine, and

where R" is H, or an analogue thereof wherein R" is CH_3, CH_2CH_3, or CHF_2;

R is H or a head group selected from the group consisting of a straight or branched C_{1-10} aliphatic, alicyclic, single or multiring aromatic, single or multiring aryl substituted aliphatic, aliphatic-substituted single or multiring aromatic, a single or multiring heterocyclic, a single or multiring heterocyclic-substituted aliphatic and an aliphatic-substituted aromatic; and

R_2 is a polyamine.

37. The derivative of claim 36 wherein R is H.

38. The derivative of claim 37 wherein -NH-CR'R"-CO- is the D- form of lysine.

39. The derivative of claim 38 wherein R_2 is spermine.

40. The derivative of claim 39 wherein R_1-X- is attached to spermine at the N_1 position of spermine.

41. A composition comprising a polyamine derivative or salt according to any one of claims 36-39 and one or more pharmaceutically acceptable excipients.

42. The composition of claim 41 further comprising a polyamine synthesis inhibitor.

43. The composition of claim 42 wherein said inhibitor is difluoromethylornithine (DFMO).

44. The composition of claim 41 wherein said one or more pharmaceutical excipients are suitable for treating a disease or condition in which the inhibition of polyamine transport is desirable.

45. The composition of claim 41 further comprising one or more auxiliary agents or one or more liquid carriers.

46. The composition of claim 45 comprising a preservative or a stabilizer or both as said auxiliary agent.

47. The composition of claim 46 comprising a stabilizer as an auxiliary agent.

48. The composition of claim 45 comprising peanut oil or olive oil as said liquid carrier.

49. The composition of claim 45 further comprising water.

50. The composition of claim 41 formulated as a solid.

51. The composition of claim 50 formulated as a capsule, impregnated wafer, tablet or powder.

52. A method comprising contacting a cell with a polyamine derivative or salt according to any one of claims 36-39.

53. The method of claim 52 wherein polyamine transport in said cell is inhibited.

54. The method of claim 52 wherein said cell is in a subject with a disease or condition associated with undesired cell proliferation.

55. The method of claim 54 wherein said undesired cell proliferation is associated with proliferation of cells of the immune system, cells of the vascular neontima, tumor cells, or with undesired angiogenesis.

56. The method of claim 55 wherein said disease or condition is cancer or post-angioplasty injury.

57. The method of claim 54 wherein said contacting is administration of said polyamine derivative or salt to said subject systemically or topically.

58. The method of claim 54 wherein said contacting is administration of said polyamine derivative or salt to said subject orally, parenterally, transdermally, intravaginally, intranasally, intrabronchially, intracranially, intraocularly, intraaurally, rectally, by infusion, or by injection.

59. The method of claim 58 wherein said administration by injection is intravenous, subcutaneous, intramuscular, intracranial, or intraperitoneal.

60. A method comprising contacting a cell with a polyamine derivative or salt thereof, wherein said derivative has the formula

$$R_1\text{-}X\text{-}R_2$$

wherein

R_1-X- is of the formula R-NH-CR'R"-CO- wherein -NH-CR'R"-CO- is

the L- form of lysine or arginine, and

where R" is H, or an analogue thereof wherein R" is CH_3, CH_2CH_3, or CHF_2;

R is H or a head group selected from the group consisting of a straight or branched $C_{1\text{-}10}$ aliphatic, alicyclic, single or multiring aromatic, single or multiring aryl substituted aliphatic, aliphatic-substituted single or multiring aromatic, a single or multiring heterocyclic, a single or multiring heterocyclic-substituted aliphatic and an aliphatic-substituted aromatic; and

R_2 is a polyamine.

61. The method of claim 60 wherein R" and R are H; R_2 is spermine; and R_1-X- is attached to R_2 at the N_1 position of spermine.

~~62. The method of claim 60 or 61 wherein polyamine transport in said cell is inhibited.~~

63. The method of claim 60 or 61 wherein said cell is in a subject with a disease or condition associated with undesired cell proliferation.

64. The method of claim 63 wherein said undesired cell proliferation is associated with proliferation of cells of the immune system, cells of the vascular neontima, tumor cells, or with undesired angiogenesis.

65. The method of claim 64 wherein said disease or condition is cancer or post-angioplasty injury.

66. The method of claim 63 wherein said contacting is administration of said polyamine derivative or salt to said subject systemically or topically.

67. The method of claim 63 wherein said contacting is administration of said polyamine derivative or salt to said subject orally, parenterally, transdermally, intravaginally, intranasally, intrabronchially, intracranially, intraocularly, intraaurally, rectally, by infusion, or by injection.

68. The method of claim 67 wherein said administration by injection is intravenous, subcutaneous, intramuscular, intracranial, or intraperitoneal.

69. A method comprising contacting a cell with a polyamine derivative or salt according to any one of claims 36-39 and a polyamine synthesis inhibitor.

70. The method of claim 69 wherein said inhibitor is DFMO.

71. The method of claim 69 wherein polyamine transport in said cell is inhibited.

72. The method of claim 69 wherein said cell is in a subject with a disease or condition associated with undesired cell proliferation.

73. The method of claim 72 wherein said undesired cell proliferation is associated with proliferation of cells of the immune system, cells of the vascular neontima, tumor cells, or with undesired angiogenesis.

74. The method of claim 73 wherein said disease or condition is cancer or post-angioplasty injury.

75. The method of claim 72 wherein said contacting is administration of said polyamine derivative or salt to said subject systemically or topically.

76. The method of claim 72 wherein said contacting is administration of said polyamine derivative or salt to said subject orally, parenterally, transdermally, intravaginally, intranasally, intrabronchially, intracranially, intraocularly, intraaurally, rectally, by infusion, or by injection.

77. The method of claim 76 wherein said administration by injection is intravenous, subcutaneous, intramuscular, intracranial, or intraperitoneal.

78. A method comprising contacting a cell with a polyamine synthesis inhibitor and a polyamine derivative, or salt thereof, wherein said derivative has the formula

$$R_1\text{-}X\text{-}R_2$$

wherein

R_1-X- is of the formula R-NH-CR'R"-CO- wherein -NH-CR'R"-CO- is

the L- form of lysine or arginine, and

where R" is H, or an analogue thereof wherein R" is CH_3, CH_2CH_3, or CHF_2;

R is H or a head group selected from the group consisting of a straight or branched $C_{1\text{-}10}$ aliphatic, alicyclic, single or multiring aromatic, single or multiring aryl substituted aliphatic, aliphatic-substituted single or multiring aromatic, a single or multiring heterocyclic, a single or multiring heterocyclic-substituted aliphatic and an aliphatic-substituted aromatic; and

R_2 is a polyamine.

79. The method of claim 78 wherein R" and R are H; R_2 is spermine; and R_1-X- is attached to R_2 at the N_1 position of spermine.

80. The method of claim 78 or 79 wherein said inhibitor is DFMO.